

WHAT IS CLAIMED IS:

1. An injection molding system comprising:
  - an injection molding machine including a machine nozzle for injecting a melt stream and a machine platen;
  - a manifold having at least one manifold melt inlet and at least one melt channel for distributing the melt stream; and
  - an anti-drool mechanism at least partially disposed within the machine platen including,
    - a melt passage,
    - a fixed pin disposed within the melt passage and sized so that the melt stream flows around the pin, the pin having a head portion configured to be received within the machine nozzle, and
    - an actuated shut-off collar disposed at least partially within the melt passage and surrounding the pin, the shut-off collar and the head portion of the pin configured to control the flow of the melt stream through the melt passage.
2. The system according to claim 1, wherein the shut-off collar is spring-loaded.
3. The system according to claim 2, wherein the shut-off collar is mechanically actuated when the pin head portion is received within the machine nozzle.
4. The system according to claim 1, wherein the shut-off collar is actuated using a pneumatic apparatus.
5. The system according to claim 1, wherein the shut-off collar is actuated using one of a hydraulic, pneumatic, electromechanical, and mechanical apparatus.

6. The system according to claim 1, wherein a locating ring is disposed between the anti-drool mechanism and the injection molding machine, the locating ring configured to allow the machine nozzle to pass therethrough and to guide the movement of the shut-off collar.
7. The system according to claim 1, wherein the melt passage is divided into multiple melt passages adjacent to the manifold melt inlet.
8. The system according to claim 1, wherein the machine nozzle injects the melt stream into a cold runner system.
9. An injection molding system comprising:
  - an injection molding machine including a retractable machine nozzle for selectively engaging an anti-drool mechanism at least partially positioned within a machine platen; and
  - a manifold having at least one manifold melt inlet and at least one manifold melt channel for distributing the melt stream;
  - the anti-drool mechanism comprising
    - a melt passage;
    - a fixed pin disposed within the melt passage and sized so that the melt stream flows around the pin; and
    - an actuated shut-off collar disposed at least partially within the melt passage and surrounding the pin, the shut-off collar and the head portion of the pin configured to control the flow of the melt stream through the melt passage.
10. The system according to claim 9, wherein the shut-off collar is spring-loaded.

11. The system according to claim 10, wherein the shut-off collar is actuated when the pin head is received within the machine nozzle.
12. The system according to claim 9, wherein engagement of the retractable machine nozzle with the shut-off collar causes the shut-off collar to retract and allow flow of the melt stream between the machine nozzle and melt passage.
13. A method for injecting a melt stream into a mold comprising:
  - engaging a machine nozzle of an injection molding machine with an anti-drool mechanism within a machine platen, the anti-drool mechanism comprising:
    - a melt inlet configured to engage with the machine nozzle,
    - a melt passage,
    - a fixed pin disposed within the melt passage and sized so that the melt stream may flow around the pin, the pin having a head portion configured to engage with the machine nozzle, and
    - an actuated shut-off collar disposed at least partially within the melt passage, surrounding the pin, and configured to prevent the introduction of the melt stream into the melt passage at the melt inlet when the shut-off collar is in a flow stopping position;
  - actuating the shut-off collar so as to allow the melt stream to flow from the machine nozzle through the anti-drool device into the manifold and therefrom into the mold;
  - disengaging the machine nozzle from the head portion of the pin of the anti-drool mechanism; and
  - returning the shut-off collar to the flow-stopping position.
14. The method according to claim 13, wherein the machine nozzle is retractable.

15. The method according to claim 14, wherein the step of actuating the shut-off collar includes moving the shut-off collar from a first flow-stopping position to a second position towards the manifold, thereby compressing a spring disposed between the shut-off collar and the manifold.
16. The method according to claim 15, wherein the step of returning the shut-off collar to the flow-stopping position is performed by spring force.
17. An injection molding system comprising:
  - an injection molding machine having an injection unit, a machine nozzle and a stationary machine platen;
  - an injection manifold having an inlet and a plurality of melt channels;
  - a sprue bushing disposed at least partially within the machine platen, said sprue bushing having a melt passage that is in fluid communication with the manifold inlet;
  - a fixed pin disposed at least partially within the sprue bushing melt passage, said fixed pin having a pin head portion; and
  - a shut-off collar disposed at least partially within said sprue bushing melt passage, said shut-off collar having a sealing surface, and said shut-off collar being movable between a first position wherein the sealing surface makes contact with the pin head portion and a second position wherein there is substantially no contact between the pin head portion and the sealing surface.
18. The system according to claim 17, wherein said shut-off collar is actuated by movement of the machine nozzle.
19. The system according to claim 17, wherein the pin head portion is received by the machine nozzle.